

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 6, 22, 33, and 34 were previously cancelled. Claims 1-5, 7-21, 23-32, and 35-36 are currently pending in this application.

I. Claim Rejections Under 35 U.S.C. § 103 regarding Chen in view of Larson

On page 2 of the Office Action, Claims 1 - 5, 8 - 11, 13 - 15, 19 - 21, 23 - 25, 27 - 29, 31 - 32 and 35 - 36 are rejected under 35 U.S.C. 103(a) as allegedly being obvious over U.S. Patent No. 6,774,740 (“Chen”) in view of U.S. Patent No. 4,569,042 (“Larson”). Applicants respectfully traverse this rejection.

A. The combination of Chen and Larson fails to teach the claimed “selecting the first path from a plurality of paths for communication between the source node and the destination node based at least in part on the propagation delay.”

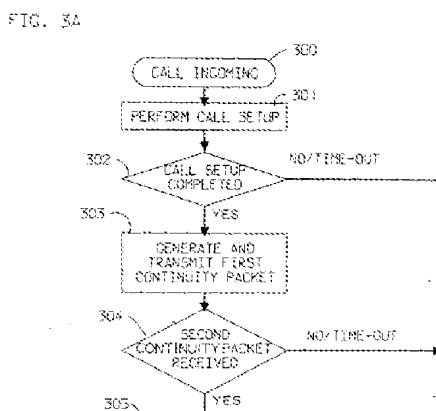
Claim 1 recites in part “selecting the first path from a plurality of paths for communication between the source node and the destination node based at least in part on the propagation delay.”

The Examiner acknowledges that Chen does not explicitly disclose a “method of timestamp of hopping one node to another node.” Applicants agree. The Examiner, however, asserts that Figures 5a, 5b, 5c, and 6 as well as Col. 1, l. 60 – Col. 2, l. 39 and Col. 2, l. 46 – Col. 4, l. 28 of Larson disclose the recited portion of Claim 1 above. Applicants respectfully disagree.

Larson is directed to “measuring the signal transmission delay through a transmission path.” *See*, Col. 2, ll. 48-50. This measurement involves “transmitting across the path in one

direction a first signal ... and, in response ... transmitting across the path in the other direction a second signal.” *See*, Col. 2, ll. 50 - 54. Applicants submit that there is only a **single** path in Larson, and as such, Larson cannot disclose “selecting the first path from a plurality of paths for communication between the source node and the destination node based at least in part on the propagation delay.”

A portion of Figure 3A of Larson is shown below:



As illustrated above, call setup is performed before the first continuity packet is transmitted. Larson describes the call setup procedure as:

In response, a communication path is set up through the system 10 by the originating terminal node 100 by initially sending a call set-up packet to the switching portion of the network 10 comprising the intermediate nodes 102-106. The call set-up packet contains, inter alia, logical address information identifying the destination terminal node, in this example the node 101. The call set-up packet reaches the intermediate node 102, which returns an acknowledgement packet to the node 100. The node 102 also responds to the destination information contained in the packet by selecting, in a known manner, one of the transmission lines 112, 113, or 115 and forwarding the call set-up packet along the selected line to the next intermediate node. That node in turn returns an acknowledgement packet to the node 102 and forwards the call set-up packet onto the next selected node. This process is repeated at each intermediate node that receives the call set-up packet, until the call set-up packet reaches the terminal node 101 through the intermediate node 103. The terminal node 101 conventionally responds by

notifying the communicating equipment 121 of an incoming call and returning an acknowledgement packet to the node 100 to complete the call path set-up process.

Further in response to receipt of the set-up packet, each intermediate node in the path stores logical-to-physical address translation information in its memory. The physical address defines the portion of the path from that node to the next node in the path. Upon receipt of each subsequent packet, each intermediate node utilizes this stored information for transferring the packet on to the next node in the previously-established physical path.

(Col. 5, l. 41 - Col. 6, l. 5.)

Thus, Larson teaches that as part of a call setup procedure, a physical path is established between the originating terminal and the terminal node. Only after the physical path is established are signals sent over the path to determine transmission delay of that path. Further, this is the only path between the originating terminal and the terminal data over which data is transmitted for a particular call. As such, Applicants submit that the combination of Larson and Chen fails to teach, suggest, or disclose the claimed “selecting the first path from a plurality of paths for communication between the source node and the destination node **based at least in part on the propagation delay.**” (Emphasis added).

For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of independent Claims 1, 21, and 31. In addition, Applicants respectfully request withdrawal of the rejection for the remaining dependent claims, each of which depends upon one of the independent claims.

B. The combination of Chen and Larson fails to teach the claimed “calculating a propagation delay between the first intermediate node and the second intermediate node.”

Claim 1 recites in part:

calculating a propagation delay between the first intermediate node and the second intermediate node, wherein

the propagation delay comprises a difference between the second time stamp and the third time stamp;

The Examiner acknowledges that Chen does not explicitly disclose a “method of timestamp of hopping one node to another node.” Applicants agree. The Examiner, however, asserts that Figures 5a, 5b, 5c, and 6 as well as Col. 1, l. 60 – Col. 2, l. 39 and Col. 2, l. 46 - Col. 4, l. 28 of Larson discloses the recited portion of Claim 1 above. Applicants respectfully disagree.

Col. 1, l. 60 – Col. 2, l. 24 discusses Patent Application 06/392,377, filed on June 25, 1982. Larson describes the invention disclosed in the application as:

The technique involves including a time stamp, of a value known to both the source and destination nodes, in every message sent through the network. The time stamp is updated at every node of the network traversed by the message: when a message enters a node, a relative time stamp is applied, and before the message leaves the node, the relative time is used to find the time spent at the node, **which time is added to the original time stamp**. At the destination node, the updated time stamp is read and the delay time spent at intermediate nodes is determined therefrom.

This technique unfortunately requires the presence of time-indicating mechanisms – clocks – at each node the network. It also requires synchronization at each node of the time-indicating mechanism that keeps track of when a message enters the node with the time-indicating mechanism that keeps track of when a messages leaves a node. Each node likewise requires a two time-indicating mechanism and for **adding this difference to the original timestamp to update it**. These requirement increase the complexity and cost of the nodes, and hence of the network. And furthermore, this technique does not account for the transmission delays accumulated by the message in passing between the various nodes.

(Emphasis added).

Thus, Larson describes the application as disclosing a message that includes a timestamp. At each node that the message arrives at, the node applies a relative timestamp. Then before the message leaves the node, the relative timestamp is used to determine the amount of time spent at the node. The timestamp of the message is then updated by adding

the amount of time spent at the node. The destination node uses the updated timestamp to determine the amount of time spent at **all** of the intermediate nodes. Applicants submit that determining the amount of time spent at **all** of the intermediate nodes is different than the claimed “calculating a propagation delay between the first intermediate node and the second intermediate node.”

Col. 2, ll. 25 - 43 of Larson discusses one solution and its problems in prior art systems:

One solution in prior art systems has attempted to resolve this problem [increased complexity/cost of nodes] by including in each packet a time stamp indicating when the packet was **transmitted from the originating node**. When the packet arrived at the destination node, the delay encountered by the packet was determined by comparing the time in the time stamp with the present time.

(Col. 2, ll. 25 – 31, emphasis added.)

Thus, the solution Larson alleges as prior art discussed above required a message to contain a single timestamp corresponding to the time the message was transmitted from the originating node. The destination node could then determine the delay for the entire route by comparing the timestamp in the message with the present time. Applicants submit that determining the delay for an entire route is different than the claimed “calculating a propagation delay between the first intermediate node and the second intermediate node.”

Col. 2, l. 46 through Col. 4, l. 28 of Larson describes the disclosed invention as:

According to this invention, the process of measuring the signal transmission delay through a transmission path involves transmitting across the path in one direction a first signal indicating the time of its transmittal and, in response to receipt of the first signal, transmitting across the path in the other direction a second signal indicating significantly the time of transmittal of the first signal. The round-trip signal transmission delay is then determined as the difference between the time of transmittal of the first signal and the time of receipt of the second signal.

(Col. 2, ll. 48 - 58.)

Col. 3, ll. 3 - 15 continues to describe the Larson invention and provides:

At the first interface, transmitting apparatus transmits through the path a first signal that indicates the time of its transmittal. At the second interface, in response to receiving the first signal, transmitting apparatus transmits through the path a second signal that indicates the time of transmittal of the first signal. Apparatus at the first interface responds to receipt of the second signal and determines the difference between the time of transmittal of the first signal and the time of receipt of the second signal to obtain the round-trip transmission delay. Half of the round-trip delay is then taken as an approximation of the one-way signal transmission delay through the path.

Thus, Larson discloses sending a first signal from a first interface that contains a timestamp to a second interface. The second interface responds to the signal, by transmitting a second signal that contains the timestamp of the first signal. Upon receipt of the second signal at the first interface, the first interface subtracts the time that the first signal was transmitted, which is stored in the second signal, from the time the second signal was received. This value is the delay for a round-trip transmission. This round-trip transmission time is halved to approximate the one-way signal transmission delay. Applicants submit that approximating a one-way signal transmission delay is not the same as “calculating a propagation delay between the first intermediate node and the second intermediate node.”

For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of independent Claims 1, 21, and 31. In addition, Applicants respectfully request withdrawal of the rejection for the remaining dependent claims, each of which depends upon one of the independent claims.

C. The Examiner has not provided a *prima facie* case of obviousness for Claims 2-5, 8-11, 13-15, 19, 20, 23-25, 27-29, 32, 35, and 36

On page 2 of the Office Action, the Examiner rejected Claims 2 - 5, 8 - 11, 13 - 15, 19, 20, 23 - 25, 27 - 29, 32, and 35 - 36 as allegedly being obvious in view of Chen and Larson. Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness for these claims. MPEP 2142 provides that the Examiner “bears the initial

burden of factually supporting any *prima facie* conclusion of obviousness.” “To reach a proper determination under 35 U.S.C. § 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention **"as a whole"** would have been obvious at that time to that person.” MPEP § 2142 (emphasis added).

On pages 2 and 3 of the Office Action, the Examiner asserts that the features of independent Claims 1, 21, and 31 are obvious in light of Chen and Larson. The Examiner, however, provides no support for the obviousness rejection for any of the dependent claims 2 - 5, 8 - 11, 13 - 15, 19 - 20, 23 - 25, 27 - 29, 32, and 35 - 36. As an example, Claim 2 recites in part “transmitting a second message from the destination node to the source node in response to the first message.” The Office Action is silent as to where either Chen or Larson supposedly discloses this feature of Claim 2. Applicants submit that for the remaining Claims 3 - 5, 8 - 11, 13 - 15, 19 - 20, 23-25, 27-29, 32, and 35 - 36 the Examiner has also failed to provide any support from Chen or Larson as to the alleged obviousness of these claims. Because the Examiner has failed to provide support for why the feature of Claims 2 - 5, 8 - 11, 13 - 15, 19 - 20, 23 - 25, 27-29, 32, and 35 - 36 would have been obvious to one skilled in the art just prior to when the invention was made, Applicants respectfully request withdrawal of the rejection for Claims 2 - 5, 8 - 11, 13 - 15, 19 - 20, 23 - 25, 27 - 29, 32, and 35 - 36.

D. The combination of Chen and Larson fails to teach “transmitting a second message from the destination node to the source node ... along the plurality of paths.”

Claim 2 in part recites “transmitting a second message from the destination node to the source node ... along the plurality of paths.” The Examiner does not point to any section of Chen or Larson as disclosing this feature. Applicants submit that neither Chen nor Larson, alone or in combination, teach each and every limitation of Claim 2.

Larson is directed toward “measuring the signal transmission delay through a transmission path.” The transmission path is established during call setup. *See, e.g.*, Col. 8,

11. 58 - 62. As such, Larson “utilize[es] a signal that **must** pass end-to-end and then back **over the same communication path**” (emphasis added). Applicants submit that requiring the path from the destination to the source be the same communication path from the source to the destination is not the same as “transmitting a second message from the destination node to the source node ... along the plurality of paths.”

Applicants further submit that Chen fails to teach or suggest “transmitting a second message from the destination node to the source node ... along the plurality of paths.”

Figure 12C of Chen is provided in its entirety below:

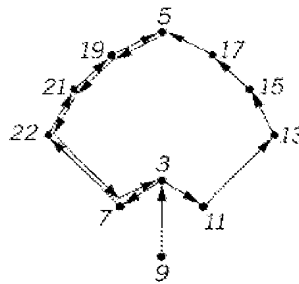


FIG. 12C

Figure 12C illustrates “node 3 transmitt[ing] several path discovery packets to several neighbors who are closest to the destination Node 5.” *See* Col. 9, l. 67 - Col. 10, l. 2. “The destination node 5 then transmits a “path update” packet back to the first node.” *See* Col. 10, ll. 3 - 5. As shown in 12C, no message is sent from destination node 5 that follows a path through nodes 11, 13, or 17. Therefore, Applicants submit that the combination of Chen and Larson fails to teach, disclose, or suggest “transmitting a second message from the destination node to the source node ... along the plurality of paths.”

For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of Claim 2.

II. Claim Rejections Under 35 U.S.C. § 103 regarding Chen in view of Larson and in further view of Chuprun

On page 5 of the Office Action, Claims 12, 16, and 26 are rejected as allegedly being unpatentable over Chen in view of Larson and in further view of U.S. Patent No. 6,115,580 (Chuprun). Applicants respectfully traverse this rejection.

Claims 12, 16, and 26 are dependent claims. Claims 12 and 16 ultimately depend upon Claim 1, and Claim 26 ultimately depends upon Claim 21. Therefore, for at least the reasons discussed above in section I., Applicants respectfully request withdrawal of the rejection of Claims 12, 16, and 26.

III. Claim Rejections Under 35 U.S.C. § 103 regarding Chen in view of Larson in further view of Baratz

On page 5 of the Office Action, Claims 17, 18, and 30 are rejected as allegedly being unpatentable over Chen in view of Larson and in further view of U.S. Patent No. 4,873,517 (Baratz). Applicants respectfully traverse this rejection.

Claims 17, 18, and 30 are dependent claims. Claims 17 and 18 ultimately depend upon Claim 1, and Claim 30 ultimately depends upon Claim 21. Therefore, for at least the reasons discussed above in section I., Applicants respectfully request withdrawal of the rejection of Claims 17, 18, and 30.

IV. The Office Action Has Failed to Respond to Applicants' Previous Arguments

In the Office Action dated November 12, 2009, the Examiner rejected Claims 17, 18, and 30 under 35 U.S.C. § 103(a), as allegedly being unpatentable over Chen in view of Larson and in further view of Baratz.

In the Office Action Response filed on February 9, 2010, on page 13, Applicants argued that Claim 30 was allowable over the cited art because Baratz does not show “mapping means for mapping said plurality of candidate routes to a plurality of quality of services classes.” In the current Office Action, the Examiner maintained the rejection of

Claim 30. On pages 6 and 7 of the Office Action, the Examiner responded to Applicants' previous arguments. The Examiner, however, failed to respond to Applicants' previous argument regarding Claim 30. As such, Applicants reassert that the combination of Chen in view of Larson and in further view of Baratz fails to disclose the claimed element of "mapping means for mapping said plurality of candidate routes to a plurality of quality of services classes" as shown in the February 9, 2010, Office Action Response.

MPEP 707.07(f) reads:

In order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken by the examiner during prosecution of an application.

Where the requirements are traversed, or suspension thereof requested, the examiner should make proper reference thereto in his or her action on the amendment.

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.

...

The examiner must address all arguments which have not already been responded to in the statement of the rejection.

(Emphasis added.) Because all of Applicants' arguments regarding Claim 30 were not addressed as disclosed above, Applicants respectfully submit that the instant Office Action is incomplete. Accordingly, if not all of the pending claims are allowed in view of the following reasons, any subsequent Office Action should be **non-final**.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date July 12, 2010

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